

REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is requested. Claims 31-50 are in this application. Claims 1-30 have been cancelled. Claims 31-50 have been added.

The Examiner objected to claims 21-30 because the phrase "greater than the well region" should read "greater than that of the well region." As noted above, claims 21-30 have been cancelled. New claims 31-50 are believed to satisfy the Examiner's objection.

The Examiner rejected claims 16-30 under 35 U.S.C. §103(a) as being unpatentable over Wei (U.S. Patent No. 5,843,813). As noted above, claims 16-30 have been cancelled. Claims 31-50 have been added to reorganize the claims, and to alternately and additionally claim the present invention. For the reasons set forth below, applicant respectfully traverses this rejection with respect to new independent claims 31, 38, and 46.

Claim 31 recites, in part,

an isolation region formed in the semiconductor material;
a well region of a second conductivity type formed in the semiconductor material . . . ;
a first region of the second conductivity type formed in the semiconductor material, the first region being spaced apart from the well region, . . . and being connected to a first line, no region having the second conductivity type and a dopant concentration greater than the dopant concentration of the well region lying between the first region and the isolation region; and
a second region of the first conductivity type formed in the well region, . . . no region having the first conductivity type and a dopant concentration greater than the dopant concentration of the semiconductor material lying between the second region and the isolation region, the second region being connected to a second line, the second line not being directly connected to the first line.

Claims 38 and 46 recite similar limitations.

In rejecting claims 16-30, the Examiner pointed to the field oxide region located between regions 250a and 250b shown in FIG. 20 of Wei as constituting the isolation region of the claims, and n+ region 256 as constituting the first region of the claims. In addition, the Examiner pointed to n-well 292 shown in FIG. 20 of Wei as constituting the well region of the claims, and p+ region 250b as constituting the second region of the claims.

However, n+ region 256 shown in FIG. 20 of Wei can not be read to be the first region. As noted above, the claims require that no region of the second conductivity type lie between the first region and the isolation region. As shown in FIG. 20, Wei teaches that n+ region 250a lies between n+ region 256 and the isolation region. As a result, n+ region 256 can not be read to be the first region. Since n+ region 256 can not be read to be the first region, claims 31, 38, and 46 are patentable over Wei. In addition, since claims 32-37, 39-45, and 47-50 depend either directly or indirectly from claims 31, 38, and 46, respectively, claims 32-37, 39-45, and 47-50 are patentable over Wei for the same reasons as claims 31, 38, and 46.

In addition, n+ region 250a shown in FIG. 20 of Wei can not be read to be the first region of the claims. As noted above, the Examiner read n+ region 250b to be the second region, which the claims require must be connected to a second line. The claims also require that the first region be connected to a first line, and that the second line not be directly connected to the first line.

However, Wei appears to teach in FIGs. 18 and 19 that n+ regions 250a and 250b are connected to first and second lines which, in turn, are both connected to node N6. Thus, rather than teaching that the second line is not directly connected to the first line as required by the claims, Wei teaches that the first and second lines of n+ regions 250a and 250b are directly connected together. Thus, since Wei fails to teach or suggest a structure where the second line is not directly connected to the first line, n+ region 250a can not be read to be the first region of the claims.

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Thus, for the foregoing reasons, it is submitted that all of the claims are in a condition for allowance. Therefore, the Examiner's early re-examination and reconsideration are respectively requested.

Respectfully submitted,

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